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Sequence Listing could not be accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2010; month=12; day=9; hr=10; min=34; sec=42; ms=412; ]

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\*\*\*\*\*

Reviewer Comments:

<210> 9

<211> 17

<212> PRT

<213> Artificial

<220>

<223> synthetic SS1 inactive control peptide

<220>

<221> peptide

<222> (1)..(17)

<400> 9

Gly Asp Arg Val Leu Ser Arg Leu His Ser Val Arg Glu Arg Ile Gly  
1 5 10 15

Lys

Regarding the above "<220>-<222>" section; since it is obvious that this is a peptide sequence, is there any additional information that you'd like to include about this particular sequence? If so, please add a "<223>" numeric identifier, and the additional information. If not, the <220>-<222> section is not necessary.

<210> 25

<211> 20

<212> PRT

<213> Artificial sequence

<220>

<223> Consensus sequence of Synthetic Susy and ARP sequences

(only the errored portions are shown below)

<220>

<221> VARIANT

<222> (9)..(9)

<223> X= Ile or Asp

<220>

<221> VARIANT

<222> (9)..(9)

<223> X= Ile or Asp or Asn

<220>

<221> VARIANT

<222> (16)..(16)

<223> X= His-His-Thr-Phe

<220>

<221> VARIANT

<222> (16)..(16)

<223> X= His or none

<400> 25

Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa

20

Several errors above: 1) since the second <220>-<223> section describing the "Xaa" at location 9 indicates more amino acids, please remove the first <220>-<223> section with "X= Ile or Asp"; 2) the <220>-<223> sections describing the "Xaa" at location 16: the first <220>-<223> section indicates "X= His-His-Thr-Phe". This is invalid, since an "Xaa" can only indicate a single amino acid. Please combine the second

<220>--<223> section describing the "Xaa" at location 16 with the first  
<220>--<223> section; do not show two <220>--<223> sections for the same  
location.

\*\*\*\*\*

Application No: 10576757 Version No: 5.0

**Input Set:**

**Output Set:**

**Started:** 2010-12-01 19:28:58.971  
**Finished:** 2010-12-01 19:29:00.773  
**Elapsed:** 0 hr(s) 0 min(s) 1 sec(s) 802 ms  
**Total Warnings:** 30  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 30  
**Actual SeqID Count:** 30

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W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

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**Actual SeqID Count:** 30

Error code      Error Description

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SEQUENCE LISTING

<110> Winter Sederoff, Heike  
Huber, Steven C  
Larabell, Carolyn A

<120> SYNTHETIC PEPTIDES THAT CAUSE F-ACTIN BUNDLING AND BLOCK ACTIN DEPOLYMERIZATION

<130> JIB-1571

<140> 10576757

<141> 2010-12-01

<150> US 60/513,275

<151> 2003-10-20

<160> 30

<170> PatentIn version 3.5

<210> 1

<211> 15

<212> PRT

<213> Artificial

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<223> synthetic consensus active Zea mays Sucrose Synthase (SuSy)  
peptide

<400> 1

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp  
1 5 10 15

<210> 2

<211> 15

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide derived from Zea mays SuSy1 protein 367-381

<400> 2

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1 5 10 15

<210> 3

<211> 15

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide derived from Zea mays SuSy2 protein 357-389

<400> 3

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp  
1 5 10 15

<210> 4

<211> 15

<212> PRT

<213> Artificial

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<223> synthetic peptide derived from Zea mays SuSy3 protein

<400> 4

Glu Asn Gly Ile Leu Lys Lys Trp Ile Ser Arg Phe Asp Val Trp  
1 5 10 15

<210> 5

<211> 15

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide derived from Drosophila melanogaster Actin 2 protein and Homo sapiens beta and gamma Actin proteins

<400> 5

Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
1 5 10 15

<210> 6

<211> 15

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide derived from Drosophila melanogaster Actin 3, 5, and 6 proteins and Homo sapiens alpha Actin protein

<400> 6

Glu His Gly Ile Ile Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
1 5 10 15

<210> 7

<211> 15

<212> PRT

<213> Artificial

<220>  
<223> synthetic peptide derived from Drosophila melanogaster ARP1

<400> 7

Glu His Gly Ile Val Lys Asp Trp Asn Asp Met Glu Arg Ile Trp  
1 5 10 15

<210> 8  
<211> 15  
<212> PRT  
<213> Artificial

<220>  
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<400> 8

Glu Asn Gly Val Val Arg Asn Trp Asp Asp Met Cys His Val Trp  
1 5 10 15

<210> 9  
<211> 17  
<212> PRT  
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<220>  
<223> synthetic SS1 inactive control peptide

<220>  
<221> peptide  
<222> (1)..(17)

<400> 9

Gly Asp Arg Val Leu Ser Arg Leu His Ser Val Arg Glu Arg Ile Gly  
1 5 10 15

Lys

<210> 10  
<211> 18  
<212> PRT  
<213> Artificial

<220>  
<223> SS2 active peptide based on Zea mays SuSy 377-392

<400> 10

Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu

1 5

10 15

Lys Lys

<210> 11  
<211> 15  
<212> PRT  
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<220>  
<223> SS11 inactive synthetic peptide

<400> 11

Ile Leu Arg Val Pro Phe Arg Thr Glu Asn Gly Ile Val Arg Lys  
1 5 10 15

<210> 12  
<211> 16  
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<220>  
<223> SS12 active synthetic peptide

<400> 12

Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu  
1 5 10 15

<210> 13  
<211> 16  
<212> PRT  
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<220>  
<223> SS15 less active synthetic peptide

<220>  
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<222> (6)...(6)  
<223> replaced Tryptophan residue with Alanines

<220>  
<221> SITE  
<222> (13)...(13)  
<223> replaced Tryptophan residue with Alanine

<400> 13

Gly Ile Val Arg Lys Ala Ile Ser Arg Phe Glu Val Ala Pro Tyr Leu

1 5 10 15

<210> 14  
<211> 9  
<212> PRT  
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<220>  
<223> SS16 less active synthetic peptide corresponding to short middle portion of SS12 synthetic peptide

<400> 14

Ser Arg Phe Glu Val Trp Pro Tyr Leu  
1 5

<210> 15  
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<220>  
<223> NR11 inactive synthetic peptide

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Gly Pro Thr Leu Lys Arg Thr Ala Ser Thr Ala Phe Met Asn Thr Thr  
1 5 10 15

Ser Lys Lys

<210> 16  
<211> 14  
<212> PRT  
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<220>  
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<400> 16

Gly Arg Met Arg Arg Ile Ala Thr Val Glu Met Met Lys Lys  
1 5 10

<210> 17  
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<212> PRT  
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<223> Small block of SS12 sequence required for less active synthetic

peptide

<400> 17

Trp Ile Ser Arg Phe Glu Val Trp

1 5

<210> 18

<211> 10

<212> PRT

<213> Artificial

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<223> SP3 inactive synthetic peptide

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Arg Arg Ile Ser Ser Val Glu Asp Lys Lys

1 5 10

<210> 19

<211> 20

<212> PRT

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<220>

<223> synthetic peptide of Drosophila melanogaster Actin protein  
consensus sequence

<400> 19

Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp His

1 5 10 15

His Thr Phe Tyr

20

<210> 20

<211> 15

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide derived from Homo sapiens ARP1 protein

<400> 20

Glu His Gly Val Val Arg Asp Trp Asn Asp Met Glu Arg Ile Trp

1 5 10 15

<210> 21

<211> 15

<212> PRT  
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<223> synthetic peptide derived from Homo sapiens ARP2 protein

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Glu Asn Gly Ile Val Arg Asn Trp Asp Asp Met Lys His Leu Trp  
1 5 10 15

<210> 22  
<211> 6  
<212> PRT  
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<220>  
<223> Core minimum block of SS12 sequence required for less active  
synthetic peptide

<400> 22

Ser Arg Phe Glu Val Trp  
1 5

<210> 23  
<211> 13  
<212> PRT  
<213> Artificial

<220>  
<223> SS synthetic peptide B

<400> 23

Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu Lys Lys  
1 5 10

<210> 24  
<211> 20  
<212> PRT  
<213> Artificial

<220>  
<223> SS synthetic peptide C

<400> 24

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro  
1 5 10 15

Tyr Leu Lys Lys  
20

<210> 25  
<211> 20  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Consensus sequence of Synthetic Susy and ARP sequences

<220>  
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<223> X=His or Asn

<220>  
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<223> X= Val or Leu

<220>  
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<223> X= Arg, Tyr or Lys

<220>  
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<223> X= Lys, Asn, Asp

<220>  
<221> VARIANT  
<222> (9)..(9)  
<223> X= Ile or Asp

<220>  
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<223> X= Ile or Asp or Asn

<220>  
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<223> X= Arg or Met

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<222> (12)..(12)  
<223> X= Glu, Phe, Cys, or Lys

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<221> VARIANT  
<222> (13) .. (13)  
<223> X= Glu, Asp, Lys, Arg, or His

<220>  
<221> VARIANT  
<222> (14) .. (14)  
<223> X= Ile, Leu, or Val

<220>  
<221> VARIANT  
<222> (16) .. (16)  
<223> X= His-His-Thr-Phe

<220>  
<221> VARIANT  
<222> (16) .. (16)  
<223> X= His or none

<220>  
<221> VARIANT  
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<223> X= His or none

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<223> X= Thr or none

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<223> X= Phe or none

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<223> X= Tyr or none

<400> 25

Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa  
20

<210> 26  
<211> 15  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Motif for a synthetic peptide which causes actin bundling and  
inhibits actin depolymerization

<220>  
<221> VARIANT  
<222> (2)..(2)  
<223> X = any amino acid

<220>  
<221> VARIANT  
<222> (4)..(4)  
<223> X = Ile or Val

<220>  
<221> VARIANT  
<222> (5)..(7)  
<223> X = any amino acid

<220>  
<221> VARIANT  
<222> (9)..(14)  
<223> X = any amino acid

<400> 26

Glu Xaa Gly Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp  
1 5 10 15

<210> 27  
<211> 15  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Motif for a synthetic peptide that causes actin bundling and  
inhibits actin depolymerization

<220>  
<221> VARIANT  
<222> (2)..(2)  
<223> X= Lys, Arg, or His

<220>  
<221> VARIANT  
<222> (5)..(5)  
<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

<220>  
<221> VARIANT  
<222> (6)..(6)  
<223> X= Lys, Arg, or His

<220>  
<221> VARIANT  
<222> (7)..(7)  
<223> X= any amino acid

<220>  
<221> VARIANT  
<222> (9)..(13)  
<223> X= any amino acid

<220>  
<221> VARIANT  
<222> (14)..(14)  
<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

<400> 27

Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp  
1 5 10 15

<210> 28  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Formula (I) for active synthetic peptides

<220>  
<221> VARIANT  
<222> (3)..(3)  
<223> X = Ile, Val, or Leu

<220>  
<221> VARIANT  
<222> (4)..(4)  
<223> X = Arg, Lys, Asn, or Thr

<220>  
<221> VARIANT  
<222> (5)..(5)  
<223> X = Arg, Lys, Asn, or Asp

<220>  
<221> VARIANT  
<222> (7)..(7)  
<223> X = Ile, Asp, Asn, or Glu

<220>  
<221> VARIANT  
<222> (8)..(8)  
<223> X = Ser, or Asp

<220>  
<221> VARIANT  
<222> (9)..(9)  
<223> X = Arg, Met, or Ala

<220>

<221> VARIANT  
<222> (10)..(10)  
<223> X = Phe, or Glu

<220>  
<221> VARIANT  
<222> (11)..(11)  
<223> X =Asp, Glu, Lys, Arg, or His

<220>  
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<222> (12)..(12)  
<223> X =Val, or Ile

<220>  
<221> VARIANT  
<222> (14)..(14)  
<223> X =Pro, or His

<220>  
<221> VARIANT  
<222> (15)..(15)  
<223> X =Tyr, or His

<220>  
<221> VARIANT  
<222> (16)..(16)  
<223> X =Leu, or Thr

<400> 28

Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa  
1 5 10 15

<210> 29  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Formula (II) for synthetic active peptides

<220>  
<221> VARIANT  
<222> (3)..(3)  
<223> X = Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

<220>  
<221> VARIANT  
<222> (4)..(4)  
<223> X = Lys, Arg, or His

<220>  
<221> VARIANT  
<222> (5)..(5)

<223> X = any amino acid

<220>

<221> VARIANT

<222> (7)..(11)

<223> X = any amino acid

<220>

<221> VARIANT

<222> (12)..(12)

<223> X = Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

<400> 29

Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp

1 5 10

<210> 30

<211> 7

<212> PRT

<213> Artificial sequence

<220>

<223> SS2 and SS12 subsequence necessary for peptide activity

<400> 30

Gly Ile Val Arg Trp Lys Ile

1 5